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ABSTRACT

A study was conducted to examine the instructional approaches to decoding and comprehension in the first grade basal reading programs published by Harcourt, Brace, Jovanovich (1983); Houghton Mifflin (1979); Ginn (1976); and SRA Reading Mastery (1983). In addition, analyses were completed on the comprehensibility of matched stories from each of the programs. Results indicated that with the exception of consonant sound instruction and text-tied comprehension interactions, the programs varied considerably. In terms of the decoding aspects of the programs, the findings showed discontinuity between levels within programs, variance in the emphasis on vowels, differences in the percent of words actually read using skills taught in the analytic and phonics programs, and striking differences between these analytic and synthetic phonics programs. Analysis of the comprehension aspects revealed that all programs had a high text-tied emphasis, that is, they focused students' attention on text as a source of answers for questions, and all included ever-increasing numbers of background knowledge questions. The study concludes that while one program does a comprehensive job in one area, another does a better job in another area; therefore, educators should try to find the series that best matches their specific needs. (Extensive tables of data are appended, as well as three pages of references and five figures giving samples from basal reading.) (FL)

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CENTER FOR THE STUDY OF READING

Technical Report No. 385

ARE FIRST GRADE BASAL READING PROGRAMS REALLY ALL THAT MUCH ALIKE? AN ANALYSIS OF THE LABYRINTH OF INSTRUCTIONAL APPROACHES TO DECODING, COMPREHENSION, AND STORY TEXT COMPREHENSIBILITY IN FOUR PROGRAMS

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Abstract

This study focused upon the instructional approaches to decoding and comprehension in the first grade basal reading programs published by Harcourt, Brace, Jovanovich (1983); Houghton Mifflin (1979); Ginn (1976) (analytical phonics, meaning-emphasis programs), and S.R.A. Reading Mastery (1983) (a synthetic phonics, code-emphasis program). In addition, analyses were completed on the comprehensibility of matched and selected stories from each of the four programs were analyzed. Results reveal that with the exception of consonant sound instruction and text-tied comprehension interactions, the programs vary considerably. Results of the analysis of comprehensibility show similar differences between programs.

Are First Grade Basal Reading Programs Really All That Much Alike? An Analysis of the Labyrinth of Instructional Approaches to Decoding, Comprehension, and Story Text Comprehensibility in Four Programs

Chall, in her benchmark publication, Learning to read: The great debate (1967), spent 20% of her report describing the differences between the Scott Foresman (1956) and Ginn (1961) basal reading programs, pre-primer through 3-2 levels. This was the first systematic review of beginning basal reader programs that appears in the literature. Chall focused on story content; instruction, and practice on new words; background preparation for story reading; teacher guidance; teacher questions on pictures, print, previous stories, or background knowledge; literal and interpretive issues; and processes ranging from structural analysis to picture clues for figuring out words in connected text.

At the conclusion of her careful work, Chall (1967) was quick to point out that, "these programs have become too easy a target for fault finding" (p. 258). She defends the important place that basal readers hold for administrators, teachers, and children who are beginning to read, but goes on to ask a range of questions about basals. Some of Chall's questions were: why are so few words taught, and why is there so much teacher talk and so

little student reading? We believe that these are important inter-related questions to answer. Almost two decades have passed since 1967 and while there is increasing consensus that basal reading programs determine classroom instruction, there has been little systematic research on the contents of these books.

Beck and McCaslin (1978) published a monograph, "An Analysis of Dimensions that Affect the Development of Code-Breaking Ability in Eight Beginning Reading Programs." The purpose of their study was to examine eight lower elementary grade reading programs to determine: (a) general program characteristics such as how reading was defined and the flow of instruction in the lessons; (b) letter/sound correspondences, such as how many letters and sounds are taught; and (c) how the teacher is to teach the program.

Beck and McCaslin performed this analysis in part because of the unresolved debate between code-emphasis and meaning-emphasis reading programs and to answer their questions about how beginning reading skills are presented in published programs. They were particularly concerned about reading programs used with compensatory education students, those students who frequently have trouble learning to read.

The programs included in the study were published by Ginn, Reading 720; Houghton Mifflin; Scott, Foresman, and Company's Open Highways; Macmillan's Bank Street Readers; Merrill's Linguistic Reading Program; Harcourt Brace Jovanovich's Palo Alto

Reading Program; McGraw Hill's Sullivan Readers; and Science Research Associate's Distar Reading I and II. These eight programs include four meaning emphasis programs with phonics components (Ginn, Houghton Mifflin, Bank Street, and Open Highways), and four code-emphasis programs (Distar, Sullivan, Palo Alto, and Merrill).

The meaning-emphasis programs have phonics components; they present phonics exercises in which students identify consonants or vowels and then read the whole word. Beck and McCaslin contend that, in these programs, students are not taught to apply phonics skills in identifying new words. These programs appear to include phonics practice while maintaining their primary focus on the compound process of word recognition and comprehension. The code-emphasis programs, on the other hand, present reading as a more linear process, a process that begins by teaching sounds in isolation, progresses to word identification, and then to an equal emphasis on word recognition and meaning by the end of first grade. All eight of these programs state that their goals are to teach decoding and comprehension, though they go about achieving these goals in very different ways.

A year later, Beck, McKeown, McCaslin, and Burkes (1979) analyzed several aspects of reading comprehension instruction in two commercial reading programs to apply theory, research, logical argument, and their own teaching experiences and intuitions to examine instructional materials. Their analyses of

basals designed for the early primary grades focused upon what they defined as (a) textual problems, (b) picture characteristics, (c) previous knowledge assumed by the text, (d) vocabulary knowledge and application, (e) directions for setting the purpose for reading, (f) how the reading lessons were divided, and (g) questions that followed story-reading. Their conclusions, after analyzing the Houghton Mifflin Reading Series (Durr, LePere, & Alsin, 1979) and the Ginn Reading 720 Program (Clymer, Wong, & Benedict, 1976) were: (a) basal reader vocabularies will be difficult for compensatory education students, (b) pictures used to illustrate the texts should be more carefully designed to depict meaningful events, (c) too much background knowledge was assumed in the stories, and (d) the programs depended too much on context as the primary means to develop vocabulary. Beck and her colleagues also raised concerns about the way basal stories are divided into parts, the questioning techniques presented in the teachers' guides, and the need for students to develop an overall sense of the story's theme before focusing on direct questions

A later study presented similar conclusions about basal reader comprehension. Durkin (1981) studied teachers' manuals for five basal reading programs, kindergarten through sixth grade. She found that the number of instructional, review, application, practice, preparation, and assessment procedures differed greatly from one series to another. Durkin

characterized basals as providing scanty direct, explicit comprehension instruction with a tendency to offer numerous application and practice exercises. Durkin's data are coded so that one cannot compare her findings for Ginn (1979) and Houghton Mifflin (1979) with the earlier editions (Ginn, 1976, and Houghton Mifflin, 1976) analyzed by Beck, et al. The other programs that Durkin studied (Allyn & Bacon, 1978; Harcourt, Brace, Jovanovich, 1979; and Scott Foresman, 1978) either had not been analyzed previously (Allyn & Bacon, 1978), or had been reviewed in earlier copyright editions (Harcourt, Brace, Jovanovich, 1979; Scott Foresman, 1978).

Recent basal reader analyses have focused on even more fine grained characteristics of programs such as the frequency of letter-sound practice, and the directness of the teacher instructions (Meyer, 1982, for example) or on just one aspect of comprehension. Winograd and Brennan (1983) explored materials for grades 1, 3, 5, and 8 from Houghton Mifflin (1981) and Economy (1980) to find out how "main idea" and "topic" were defined. They also searched for differences in instructional procedures and found that Economy distinguished between topic and main idea and began teaching topic in first grade. Houghton Mifflin, on the other hand, did not differentiate between main idea and topic until third grade and then taught main idea first. Winograd and Brennan also report that both programs used reading and listening exercises to teach main idea through grade eight.

They also found differences in the way the response mode was presented to students in main idea exercises, and in the type of text used in eighth grade, as well as whether or not a main idea was explicitly stated in the passage.

Hare and Milligan (1984) analyzed four basal reading programs (Allyn & Bacon, 1978; Scott, Foresman, 1978; Holt, Rinehart, & Winston, 1977; and Scott, Foresman, 1983) for grades 1-6. They differentiated between explanations and directives and then counted seven types of explanations and four kinds of directives in the two programs. Like Durkin, Hare and Milligan reported their results in such a way that a reader cannot identify any series or compare these findings to previous research. Their primary findings were that explanations evaded difficult issues, and the result was that the similarity was greater than dissimilarity in the four programs.

Why Analyze Beginning Reading Programs?

Regardless of research support for phonics instruction and pleas for integrating phonics instruction with word reading (Anderson, Hiebert, Scott, & Wilkinson, 1985), controversy continues in the field of reading over whether code-emphasis is better than meaning approaches for teaching beginning reading; these comparisons typically label a program as either code or meaning emphasis without careful attention to a variety of characteristics of the materials or context in which they are used. Only two studies to date have attempted to predict student

reading performance while carefully taking some properties of basal reading programs into account (Barr, Dreeben, & Wiratchai, 1983; Lesgold & Resnick, 1982). It is our contention that a careful examination of basal readers is only one piece of the complicated puzzle that will determine the long-term differences in developing reading comprehension ability for large numbers of students.

Numerous research reports have focused on the differences between meaning-emphasis and code-emphasis approaches to beginning reading. In the Handbook of Reading Research (P. D. Pearson, R. Barr, M. Kamil, & P. Mosenthal, Eds., 1984), Barr summarized what we have learned from two decades of research on beginning reading. First, the instructional method is apparent in learners' performance. This is particularly true when children are first being taught to read. Second, one approach has not been shown to consistently produce superior student performance. Third, differences in student performance within classes taught with common materials suggests that variables in addition to instructional method contribute to producing variations in student achievement.

Barr further suggests that global comparisons of meaning-emphasis versus code-emphasis programs are "unproductive" because of those researchers' failure to examine other aspects of instruction. In addition, we have, at best, cloudy knowledge of how basal programs differ because research articles often report

categories without clear definitions and also because investigators have developed somewhat arbitrary definitions that vary from one study to the next.

This analysis yields findings from a systematic examination of four first grade basal reading programs selected because they represent a range of instructional approaches along the continuum of meaning-emphasis (Houghton-Mifflin, 1979) to code-emphasis (S.R.A., 1983) programs. All the categories compared bear generic labels because careful examination of these materials reveals they don't match commonly accepted definitions in the field of reading, nor do they actually do instructionally with various word-types what they say. The inconsistent word group treatment both within and between first grade basal programs encouraged us to develop simple categories with clear definitions. Half a dozen persons used these definitions with interrater reliability above .85 to compare these four programs.

Research Definitions

For example, Durkin (1983) defined the goal of sight word methodology as, "children will be able to identify words on sight without first having to go through conscious, letter-by-letter analysis" (p. 100). She went on to say that, "Whoever responds to the query, 'What does that word say?' is employing whole word methodology" (p. 100). Durkin emphasized that single exposures to words seldom result in permanent retention. Therefore, she carefully delineated when to use whole word methodology, words

that are appropriate for whole word instruction, and the important role that practice plays in promoting automaticity in children's abilities to identify words accurately.

To summarize, using Durkin's widely accepted definitions and procedures, one would expect to be able to examine beginning basal reading programs, either meaning-emphasis or code-emphasis, and readily identify sight words because of their rare qualities, and the type of instructional treatment they received. Such is simply not the case in the four programs we examined. Here, in fact, is what we found.

Basal Definitions

The following portion of this analysis was conducted to answer two questions. First, how do the three analytic phonics programs classify their reading vocabularies? Second, how is instruction tailored to different word-types? Prior to this analysis, our expectation was that words would be classified as either 'rule-based to conform to regular letter sound relationships' (decodable) or as sight words. In the case of the former, we expected instruction to develop a bank of decoding skills that students could later use independently to decode new words. Alternatively, we expected to find sight words presented in rich contexts. We also expected instructions for teachers to identify words for students and then provide substantial practice.

Below are excerpts from each series which exemplify the series' method of word classifications. Examples of introduction and instruction for words follow. These excerpts are typical of instruction on whole words in each program.

Houghton-Mifflin. Houghton-Mifflin, 1979, defines new vocabulary words as follows: "Basal words are words that appear often in many kinds of printed matter and they are reinforced in this series through frequent repetition so students will learn to recognize them instantly. Non-basal words are important to certain reading selections in this series, but they do not occur frequently enough in other printed matter to warrant extensive repetition" (Houghton-Mifflin, 1979, Footprints, Level D, page 125).

In this example from Teaching Unit 7 of Houghton-Mifflin's Footprints, six new words appear. 'Wait,' 'after' and 'animals' are basal words, and 'tickets,' 'Dad,' and 'stopping' are non-basal words. In Figures 1 and 2, excerpts from the decoding skills portions of the lesson pertaining to vocabulary words appear. The phonograms /ell/ and /sc/ and the two sounds of 'c' are presented, though none of them is represented in the vocabulary list. In another activity related to decoding skills, the 'ing' ending is presented in conjunction with the unit vocabulary word 'stopping.' Recognition of four of the six words is practiced in the section entitled 'Discriminating Among Words.'

Insert Figures 1 and 2 about here.

In Figures 3 and 4 are comprehension-related exercises for Teaching Unit 7 of Houghton Mifflin, Footprints. All vocabulary words appear in a sentence construction exercise, but none of the words is used in the 'Using letter/sound association and context' activity. An examination of the frequency with which the three basal and three non-basal words are practiced in this lesson reveals substantial contradiction between the actual lesson presentation and Houghton-Mifflin's stated goals for instruction of basal and non-basal words.

Insert Figures 3 and 4 about here.

Ginn. Vocabulary words in Ginn 720 (1976) are classified as follows: "Basic Words contain phonemic and/or structural elements not previously taught in the program, are new to the program and appear at least three times within the selection or level . . . . Decodable Words are new to the program and contain all previously taught phonemic and/or structural elements." (Ginn 720, 1976, Helicopters and Gingerbread, Level 4, p T14)

In the example from Ginn 720, Level 4, Helicopters and Gingerbread, the words 'animals,' 'needs,' 'she,' 'helicopters' and 'airport' appear with instruction as basic words. The

decodable words, 'big,' 'men' and 'in' all contain sound/symbol relationships which the students have encountered in previous lessons. Instruction/practice of these words does not occur anywhere in the lesson.

Basic words appear first for the students in context (see Figure 5). This presentation is followed by practice of word recognition and identification in isolation. Words are then reviewed in context.

Insert Figure 5 about here.

The phonics instruction provided in this lesson is presented in Figure 6. The lesson presents the /ly/ and /ee/ sounds. Although the long 'e' sound is present in two of the vocabulary words (needs and she), these words are referred to neither in the lesson nor in the practice exercises that follow.

Insert Figure 6 about here.

Harcourt, Brace, Jovanovich. Harcourt, Brace, Jovanovich, Level 3, Magic Afternoon, 1983, classifies vocabulary words with reference to skills taught previously in the program. "A word printed in color (in the vocabulary list at end of book) contains a sound/symbol relationship previously presented in a Word Service/Decoding lesson. All other words are printed in black

type" (Harcourt, Brace, Jovanovich, 1983, Magic Afternoon, Level 3, p T306).

In this lesson, the vocabulary words 'she,' 'with' and 'then' are words which contain previously taught sound/symbol relationships. The other new words, 'splash,' 'swam' and 'from' do not. There is a discrepancy between the end of book classification and the lesson classification of these words. In the lesson, only 'she' is identified in bold print as being skills related.

Figure 7 presents the comprehension/context skills related segments of instruction. All six of the new words are presented in context in workbook exercises, but there is no recognition or identification of the words in isolation.

Insert Figure 7 about here.

The phonics/decoding example in Figure 8 presents the introduction of the /sh/ sound. No reference is made in this lesson to the vocabulary words 'she' or 'splash' though both contain the target sound.

Insert Figure 8 about here.

How This Research Differs from Previous Work

Instructional Flow

This research differs from that reported previously because we present our findings in book or lesson increments instead of simply summarizing categorical data to illustrate differences between programs. By presenting the data this way we can compare the differences in the instructional flow for a school year in all categories and series. We believe that the introduction and flow of beginning reading instruction may be as important to examine as the actual "end of year" total differences between programs. Common sense and informed opinion suggest that if students are going to apply analytic phonics methods, for example, they may need to know more than beginning consonants. Or, that one would expect a logical progression for comprehension interactions from single words to sentences and then to paragraphs.

Within and Between Program Comparisons of Decoding and Comprehension

This study differs from the work previously reported in a second way. It examines decoding and comprehension activities in the same four basal reading programs.

Comprehensibility

Third, we have gone beyond previous research to match and analyze stories from each series with respect to their "comprehensibility." This part of the study was guided by work

by Beck, McKeown, Omanson, and Pople (1984). Researchers who demonstrated that students' comprehension increased after the basal text was made more comprehensible.

The remainder of this paper is divided into three sections reporting the method and results for each of the three categories analyzed: decoding, comprehension, and comprehensibility in the four first grade basal programs. A discussion follows each part. Then, the final section integrates findings from the analyses and discussions in concluding remarks.

Decoding Instruction and Practice

Meaning-Emphasis Programs

The meaning-emphasis programs clearly depend upon analytic phonics to teach decoding. These programs are Houghton Mifflin; Harcourt, Brace, Jovanovich; and Ginn. Eight variables were counted in every page of the teachers' editions of these three programs. Guides for all books covered in first grade were included. These results appear in Table 1. Definitions for each category for the meaning-emphasis programs are as follows:

Consonant Sounds - Any single consonant sound students identified in whole words.

Vowel Sounds - Any single vowel sound identified in whole words.

Sound Blends - Combined consonant sounds such as "tr," or "bl" identified in whole words.

Letter Naming - Activities in which students identified individual letters by name.

Rules - Phrases or routines such as, "When two vowels go walking, the first one does the talking," intended to teach information for students to use to decode words.

Rhyming - Oral or written activities in which the teacher identifies an ending or series of rhyming words and calls students' attention to the pattern.

Vocabulary Words - The number of words presented in isolation in each program. This is a measure of practice on individual words, not a count of the number of unique words introduced in each program, typically tied to story reading.

Words in Text - The total number of words appearing in the students' texts, including stories, poems, and plays.

Insert Table 1 about here.

The analytic phonics programs have almost exactly the same number of consonant sounds, but there is much less consistency between programs for vowel sounds, blends, letter naming, rules, and rhyming. There is a particularly great difference in when the programs introduce vowels. Similar inconsistencies are readily apparent for the number and progression of vocabulary words and the number of words in the text.

Insert Table 2 about here.

The Code-Emphasis Program

Distar Reading Mastery, a synthetic phonics, code-emphasis program, is clearly different (see Table 2). Of particular interest with this program in comparison to the analytic phonics programs is the high number of vowel sounds and the flow of vowel sounds presented in isolation. There is also a large amount of blending that results in a reading vocabulary which averages from one and a half to three times the number of words read in isolation in the analytic programs. But, Distar's number of words in text (stories) is only about half to a third of those in the other three programs; this means that students receive much more practice on isolated words then on connected text.

The Flow of Instruction

Consonant sound practice. Of interest also is the way each program covers similar content. For example, Houghton Mifflin, Harcourt, Brace, Jovanovich, and Ginn all have consonant sound practice irregularly spaced in their first grade books. Houghton Mifflin concentrates consonant sound practice in its first and fourth books while Harcourt, Brace, Jovanovich and Ginn have about 70% of their practice in their first three books. On the other hand, Distar spaces consonant practice fairly evenly throughout its 160 lessons.

Vowels, blends, letter names, rules, and rhyming. Even more variation appears in the way the four programs handle vowels, sound blends, letter naming, rules, and rhyming. The number of vocabulary words practiced is also irregular as exemplified by the differences between Houghton Mifflin's "Rockets" and "Surprises." "Rockets," the first book, has far more vocabulary words than the other three books. All programs except Ginn show a gradual increase in the number of words students read in text, but Ginn has an irregular pattern for the first three books.

Insert Table 3 about here.

Decoding summary. Table 3 provides summary information in seven categories for each of the four programs. This summary table highlights several differences between the three analytic phonics programs. Harcourt, Brace, Jovanovich provides the most practice on sounds, whereas Houghton Mifflin contains the greatest practice on letter names. Ginn has more than three times the number of rules than the other programs, and Harcourt, Brace, Jovanovich by far the greatest amount of rhyming practice.

Despite the differences in phonics practice emphasis, the three analytic programs apply phonics to close to the same percentage of vocabulary words, about 10%. Distar Reading Mastery, in contrast, applies its synthetic phonics to over 95% of its vocabulary words. The final two columns show Harcourt,

Brace, Jovanovich practices the least reading vocabulary while Distar Reading Mastery practices the most words in isolation. The number of vocabulary words practiced bears little relationship to the number of words in the stories, however. For example, Distar has the lowest number of words in stories and the highest number of words practiced in isolation. Harcourt, Brace, Jovanovich, on the other hand, has the second highest number of words in the students' texts and the lowest number of words practiced in isolation.

Despite continuing controversy over how to teach decoding, and the clear differences between an analytic and a synthetic phonics approach, there is consistent agreement that comprehension is the essential goal of reading instruction. The next portion of this paper describes the programs' various teacher-directed comprehension interactions.

Comprehension Interactions

We used the Pearson and Johnson (1978) taxonomy to classify comprehension questions. Text explicit questions were answered "right there" in the text; text implicit questions could be answered if the reader "searched to find" the answer. Background knowledge questions were Pearson and Johnson's "scriptal" category--questions readers had to answer with information in their heads because the answer was not in the text.

We broke the categories down to allow a comparison of questions at three text levels: word, sentence, and picture.

Our rationale for making these distinctions is that in beginning reading it makes sense for the level of comprehension to parallel the text. Therefore, for first grade texts, we anticipated that picture, word and sentence interactions would dominate comprehension activities. Then, as the amount of text students read increased, we expected that changes in interactions would follow suit. First grade basal readers are often quite dependent upon pictures to carry much of the story line. For this reason, we included explicit and implicit categories for picture questions, as they are essential parts of the text.

We also counted interactions that required students to summarize information presented in the text as well as interactions that had students predict what would happen next. Some basals also had a number of opinion questions, presumably included to have students integrate background knowledge and the text.

We counted each comprehension interaction in the Teachers' guides for all levels of all programs. These results appear in Table 4.

Insert Table 4 about here.

Question Types

Text-explicit questions. The analysis of comprehension interactions yielded irregularities between programs somewhat

greater than those found for decoding interactions, except for one area. The number of text explicit word interactions were fairly consistent for three of the four programs, with Harcourt, Brace, Jovanovich having the largest number of word level text explicit interactions. Houghton Mifflin and Distar, however, had no word level questions after about midway through the first grade materials. If comprehension interactions were designed to follow the development of the text, one might anticipate a pattern like the one that appears in Houghton Mifflin and Distar for word level, text explicit interactions. In both of those programs, word level questions begin as soon as students read word level text. Likewise, one would anticipate that the number of sentence level questions would increase from book to book, thereby following naturally the increases in the amount of text students read. These expectations were borne out in only Harcourt, Brace, Jovanovich and Distar.

Background questions. One might speculate further that the need for background knowledge interactions would grow from the beginning to the end of the first grade materials because as the reading vocabulary grows students are capable of reading increasingly complex content. This pattern does in fact materialize in all of the programs. It is particularly obvious in the Distar program.

Prediction and opinion questions. Only three of the four programs include prediction questions, but all have opinion

questions. Opinion questions maintain a fairly even frequency throughout the Houghton Mifflin books, whereas they increase regularly in the other three programs. Similar irregular patterns appear both within and between programs for word, sentence, and picture-level text implicit questions, and even for summary questions.

Summary of questions. Table 5 summarizes the total number of comprehension interactions in each of the ten categories and then presents the percentage of interactions coded that are text-tied. All comprehension interactions that appear in the teachers' guides except those for background knowledge and opinion were counted as text-tied. Harcourt, Brace, Jovanovich and Distar have the lowest percentage of text-tied questions, while Ginn and Houghton Mifflin have the most.

Insert Table 5 about here.

"Comprehensibility" of Basal Reading Text

The third question we asked of these basal programs was how comprehensible is the text students read? We began this work knowing that this is a basically uncharted course. However, recent work by Beck, McKeown, Omanson, and Pople (1984) demonstrated that the fewer incoherences a text has, the better students comprehend. Furthermore, Beck and her colleagues provided clear definitions and guidelines for the text

characteristics they manipulated to make stories more comprehensible. So, we too, chose to focus on problematical references, such as those references that were ambiguous, distant, or indirect; lack of requisite background knowledge; unclear relationships between events; and the inclusion of irrelevant events or ideas.

Coding Matched Stories

The first step in our anlaysis was to match three types of stories across the four publishers from the last book of the first grade programs, because we believed there might be differences in comprehensibility related to story-type. We selected one "personification story," a story in which an animal was the talking, main character; one story with a "dilemma" for the main character to reconcile; and third, a story that was representative of expository text. We tried to select stories that were roughly the same length.

Since there is no expository selection in the final book of Houghton Mifflin, "Honeycomb," we selected a story from the third book, "Footprints." There are no expository selections in Distar Reading Mastery.

Three persons established high inter-rater reliability of approximately .85 by working first together and then individually to code incoherences in the eleven selections. These findings appear in Table 6. The first part of the table shows the results of the analysis of the matched stories. The average number of

words per incoherence illustrates the differences between stories as if incoherences were spaced evenly in each story. These calculations are meant to give only a rough measure of the frequency with which students encounter incoherences in each story. The Harcourt, Brace, Jovanovich story, "Animal Art Show" would have the fewest words between incoherences, while the Distar Reading Mastery story, "The Fat Eagle," would have the largest number of words between incoherences.

Insert Table 6 about here.

Frequency of incoherences. The pattern for the four publishers is similar for the dilemma stories except that the Ginn story, "Freckles," has the lowest number of words, on the average (just over eleven words), between incoherences. The pattern between publishers is then somewhat reversed for expository passages. No publisher has more than 47 words between incoherences, and two of the three selections average under 11.

In addition to calculating the number of words per story and then computing the average number of words between incoherences, we also counted the number of propositions in each story. We used the Omanson, Beck, Voss, and McKeown (1984) definition of propositions, "a cohesive set of units of meaning" (49). The number of propositions for each matched story also appears in the top part of Table 6. The last column reports the average number

of propositions per incoherence. The relative standing of the stories is the same whether the number of words or the number of propositions is used to provide a measure of the relative frequency of the incoherences.

Results for Unmatched Stories

The second part of Table 6 shows a comparison between publishers for one-third of the remaining stories in each basal's final book. Starting with the first story in each final book, we analyzed every third story in the same way we had analyzed the matched stories. These analyses were done to see if the matched stories were representative of the other stories in the book.

Frequency of incoherences. A comparison of means and standard deviations for the average number of words/incoherence for the matched stories and the remaining selections appear in Table 7. The patterns for words per incoherence are generally consistent for the matched and unmatched stories though there is a shift in rank for Houghton Mifflin and Distar. This shift in rank can be explained in part, we believe, because we "forced" the matched analysis with Houghton Mifflin by including an expository selection from the third book, "Footprints," because none existed in the fourth book, "Honeycomb." If we removed the Houghton Mifflin expository passage, "Real Dinosaurs," Houghton Mifflin then averages 111.7 words between incoherences for the matched selections. Houghton Mifflin would then be the most

consistent of the four programs across matched and unmatched selections.

Insert Table 7 about here.

Discussion and Implications

The clear answer to how similar the four reading programs we analyzed are on measures of instruction, practice, and text is that, with the exception of consonant sound instruction in the three analytic phonics programs and the percentage of text-tied comprehension questions, these four programs vary considerably. The next portion of this paper addresses major issues and concerns that stem from these findings.

Decoding

Discussion of the decoding aspects of these four programs will focus on four issues: discontinuity between levels within programs, variance in the emphasis on vowels, the major differences in the percent of words actually read using skills taught in the analytic and phonics programs, and the striking differences between these analytic and synthetic phonics programs.

Discontinuity between levels within programs. We are unable to understand or explain why a program would deliberately range in emphasis on consonant sounds, as the meaning-emphasis programs do in their first four or five books. The patterns found in these

three programs do not suggest planning for introductions, practice, or consolidation of consonant sounds.

Variance in the treatment of vowels. The questions raised about consonant sound practice are equally, if not even more, appropriate for vowel introduction and practice. Of the three analytic phonics programs, only Houghton Mifflin has vowel practice in the first book. How do the other programs expect students to identify words beyond the hints they receive from beginning consonants?

Application of phonics. Our analyses replicate Beck and McCaslin's findings that although each of the analytic phonics programs has thousands of practices on individual letter sounds, sound blends, and letter-naming, they then provide students very little opportunity to apply phonics skills to read words in isolation. When this is the case, students certainly have "hints" about which words are which from the beginning consonants, but virtually no help beyond that. A logical question that follows, then, is why provide all of this practice of sounds within words when so little use is made of it?

Analytic and synthetic phonics, revisited. The differences between the analytic and synthetic phonics programs in this analysis are striking. Of particular interest are six variables. First, vowels receive almost as much attention as consonants in the synthetic phonics program. This difference exists despite the fact that there are only five vowels in the English language

to be learned in their long and short versions in comparison to 21 consonants. Why is this? The vowel sounds are much harder to discriminate from each other than are all but a few consonants (p, d, t, b, for example). Second, blending is taught only in the synthetic phonics program, and it is in fact needed only there, for reasons already discussed.

The third difference involves rhyming. Distar Reading Mastery presents rhyming in a utilitarian way, orally first and then with short lists of words. The teacher is directed to use the word, "rhyme," and then to have the students read the list as the teacher repeats the phrase, "rhymes with xxx," etc. With this procedure, there is little room for students to doubt why they are learning to rhyme. The analytic programs typically present considerably less rhyming, except for Harcourt, Brace, Jovanovich which in fact has more practice. In the analytic phonics programs, teachers are usually directed to have students "notice how the words are similar," or otherwise generate the concept of rhyming.

Fourth, in the synthetic phonics program students use virtually everything they are taught that can be classified as "phonics" to read words. Therefore, there is a certain efficiency in the total instructional approach. Fifth, there is a clear progression in the number of vocabulary words read only in the synthetic phonics program, whereas the number of

vocabulary words read per book fluctuates substantially within and between the analytic phonics programs.

Finally we found that the meaning-emphasis programs purport to teach sight words and words in context when, in fact, instruction in these strategies is minimal and inconsistent. In short, we are saying that these meaning-emphasis programs do not do what they say they are doing. Students in these programs may in fact depend substantially on the large amount of analytic phonics practice they receive to figure out words. If this is in fact the case, careful links between analytic phonics practice, words in isolation, and vocabulary in connected text might facilitate student performance.

Comprehension

Discussion of differences in comprehension instruction and practice will focus on: the implications of interactions that focus students' attention on the text instead of elsewhere; informed hunches about the logical increase in need for background knowledge questions; and speculation about summary questions.

Text-tied emphasis. We would argue that programs that focus students' attention on text as soon as they begin reading demonstrate to students that they are to use the text to answer some questions as they read. All four of these programs have high text-tied emphasis.

Increasing background knowledge emphasis. We would also argue that logically, programs should include ever-increasing numbers of background knowledge questions. As reading selections become increasingly loaded with information, students may not relate information in the text spontaneously to their experiences. The early first grade basal reading selections typically are about very familiar circumstances and events. Familiar, unambiguous content should reduce the need for background knowledge questions from the teacher. We would argue, however, that a well-designed beginning reading program would include some background knowledge, text-explicit, and text-implicit questions in even the earliest reading materials to engage students from the very beginning in reading as the interactive processing of what they know and what is in the text. The four programs accomplish this goal.

Irregularity of summary questions. One of the strangest patterns for comprehension interactions in these four programs is the irregular appearance of summary questions. If we merely examine the pattern for summary questions in the Houghton Mifflin program, we see that over three-fourths of the year's practice with summary questions took place in the first book, "Rockets." Why? The entire "Rockets" book is less than 1400 words long. The stories are short, and, therefore, there is very little to summarize. Houghton Mifflin's final first grade book, "Honeycomb," on the other hand, with just under 7,000 words of

text and only 10 stories, had only 10 summary questions. It makes intuitive sense that the importance of summary questions should grow as students read longer and longer selections.

What do/did "meaning-emphasis" and "code-emphasis" mean in these programs? Taken together, our talleys for decoding plus our talleys for comprehension interactions represent virtually all of the practice teachers are directed (in their respective manuals) to give. Therefore, a simple way to classify programs along the meaning-emphasis to decoding-emphasis continuum is to add together the total number of decoding and comprehension instructional interactions in the programs and then compare the percentage of each. These results appear in Table 8.

Insert Table 8 about here.

These simple calculations do, in fact, support our contention that these four programs place differently along a continuum from meaning-emphasis to code-emphasis. Distar Reading Mastery is clearly code-emphasis. Houghton Mifflin is fairly clearly meaning-emphasis, and Ginn and Harcourt Brace fall between.

It is interesting to note that these figures show that the three analytic phonics programs actually have very similar numbers of total interactions for decoding and comprehension, while Distar Reading Mastery has less than two-thirds the total number of interactions.

Comprehensibility

The overall patterns of inconsistency between and within the four programs in regard to decoding and comprehension are not as consistent as our measures of comprehensibility. There are fairly consistent differences in the coherence of stories in the final book of Houghton Mifflin, "Honeycomb," and in the Distar Reading Mastery stories. The most important issues raised by our analysis of the stories in these four programs are: why we believe the comprehensibility of the selections is important; differences in the number of selections; qualitative differences in stories beyond measures of incoherence; and variance in the adaptations from and use of trade book selections.

Importance of comprehensibility. We argue that the comprehensibility of first grade reading materials, in particular, should be as high as possible. Why? It is generally accepted that beginning readers must expend a certain amount of cognitive processing effort simply to figure out the words before them. By the end of first grade few students have mastered enough decoding skills with a large enough range in vocabulary to have achieved automaticity. Therefore, for most six- and seven-year-olds it is reasonable to assume that some effort must be devoted to decoding, while at the same time, they must try to derive meaning from what they are reading. It seems logical to assume that if the text these students read is ambiguous, disconnected, or focused on information they probably lack as

background knowledge, students may have an even more difficult time figuring out the meaning of what they read. Text containing numerous incomprehensibilities may place a heavy burden on beginning readers. Using our system of analysis, the Harcourt, Brace, Jovanovich selections are quite consistently incomprehensible. The Ginn selections vary considerably in their comprehensibility, and Houghton Mifflin and Distar Reading Mastery are very comprehensible. Why? How are these programs different?

Use of trade books or trade book adaptations. Houghton Mifflin uses a substantial number (27%) of reprinted or moderately adapted stories, starting with their fourth book, "Honeycomb." Almost 25% of the Ginn selections are adapted from trade books or folktales, but the adaptations appear to be much more substantial than those made by Houghton Mifflin. In fact, Ginn begins using adapted selections much sooner than Houghton Mifflin, but the earlier use of trade stories and books appears to have forced Ginn to make more adaptations in the original text. Therefore, the very early use of adaptations seems to have created a serious problem while apparently trying to solve another one, exposing children to "good" literature. Harcourt, Brace, Jovanovich, on the other hand, has only about 8% selections from trade books and/or stories.

Distar Reading Mastery's stories are very comprehensible for quite different reasons from those that we can attribute to

Houghton Mifflin. None of the Distar stories is either an adaptation or tradebook. Virtually all of the Distar Reading Mastery stories are conversations between characters, usually animals. These conversations are explicit, regardless of their topic. Therefore, they are very easy to understand.

Some justifiably argue that lower grade basal programs story selections have as their major functions to provide "practice text" for vocabulary words. We accept this argument and therefore chose to analyze only those stories at the end of the first grade programs, thereby limiting our analysis for the entire series to decoding and comprehension interaction specified in the teachers' editions.

But, are these stories great literature? Houghton Mifflin uses several classic children's stories in their original form, thus exposing children to several very well-written, entertaining, comprehensible stories. Furthermore, Houghton Mifflin appears to increase the number of trade book selections in their second and third grade programs.

Concluding Remarks

The results of this and subsequent basal reader analyses for grades 2-5 will hold prominent places in developing a causal model of reading comprehension development (Meyer, Linn, & Hastings, 1985). Work on data reduction procedures are in-progress to produce a score for each dimension of the four programs' decoding, comprehension, and text characteristics.

For, regardless of the debate on the superiority of beginning reading programs in the field of reading research, there is consensus that students' abilities to comprehend what they read is the common goal, with reading defined as "the process of constructing meaning from written texts" (Anderson, Hiebert, Scott, & Wilkinson, 1985, p. 7).

Other analyses of instructional programs have given only pieces of the complex mosaic of first grade reading instruction. It is our contention that a prerequisite to understanding variance in student achievement both between program and within classroom differences is systematic analyses of numerous variables such as the basic characteristics of the instructional materials used, the amount of time teachers allocate to instruction, the frequency and type and sequence of teacher-student interaction, and teachers' distribution of turns. These classroom variables must then be placed in the proper context of students' lives--outside school as well as inside classrooms--in order to understand accurately and fully what is causing some students to become able to construct meaning from text successfully while others cannot.

What are the implications from these analyses of textbooks? And finally, what message is there in this analysis for publishers?

Implications for textbook selectors. Basal reading programs are packed with exercises, and the variability found in these four programs suggest that it may be difficult if not impossible

to get a sense of the program's structure with a quick sampling procedure. It appears important to look at decoding, comprehension, and comprehensibility interactions to have a sense of what a total "program" is like. These analyses suggest that whereas one program does a comprehensive job in one area, another program does a better job in another area. Since no one series seems to do a good job in all areas, after teachers and administrators establish their objectives, they may then try to find the series that best matches their needs.

Characteristics of an effective program. It is our informed judgment that an effective beginning reading program must present decoding exercises that are then applied when students read words in isolation and in context. Otherwise, why bother to present those thousands of exercises? In addition, shouldn't that program either present consonants and vowels in isolation as well as some mechanism such as blending or rhyming for putting the subskills together, or systematically differentiate sight words and decodable words and then provide instructional practice for students on words dependent upon their classification. Also, might it not make sense for meaning-emphasis programs to teach students how to figure out words from context instead of providing simplistic exercises? Furthermore, shouldn't a program focus on comprehension as soon as students begin decoding words and then present instruction and practice as an interactive process that combines what students know with what appears in the

text in an organized, somewhat planned way? And, last, but certainly not least, might the stories and other student selections be as comprehensible as possible to reduce the work load for young readers struggling to figure out what the text is while also figuring out what it means.

Message to publishers. How many of the inconsistencies and overall questions raised in this analysis might be avoided? How many of these problems are the result of many persons working independently on one book in the program? Then, how might overall characteristics of the programs be monitored during development? Computer programs could certainly keep track of skills, words, and text characteristics, thereby almost certainly helping to keep track of what is taught when and how often. Most programs would be strengthened by a more logical and carefully controlled progression of introduction and sequential practice.

Since it appears that there are well written trade books that can be used even at the first grade level, we would encourage publishers to use them whenever possible with as few adaptations as they can manage. In addition, since the expository texts we analyzed were consistently more incoherent than the narrative texts, we would suggest that basal publishers review expository trade books to incorporate them into their programs or delay using expository passages until the series has introduced more reading vocabulary and can, therefore, produce more coherent text.

References

Anderson, R. C., Hiebert, E. H., Scott, J. A., & Wilkinson, I. A. G. (1985). Becoming a nation of readers. National Institute of Education.

Barr, R. (1984). Beginning reading instruction: From debate to reformation. In P. D. Pearson (Ed.), Handbook of reading research (pp. 545-581). New York: Longman.

Barr, R., Dreeben, R., & Wiratchai, N. (1983). How schools work. Chicago: University of Chicago Press.

Beck, I. L., & McCaslin, E. S. (1978). An analysis of dimensions that affect the development of code-breaking ability in eight beginning reading programs. University of Pittsburgh, Learning Research and Development Center.

Beck, I. L., McKeown, M. G., McCaslin, E. S., & Burkes, A. M. (1979). Instructional dimensions that may affect reading comprehension: Examples from two commercial reading programs. University of Pittsburgh, Learning Research and Development Center.

Beck, I. L., McKeown, M. G., Omanson, R. C., & Pople, M. T. (1984). Improving the comprehensibility of stories: The effects of revisions that improve coherence. Reading Research Quarterly, 19(3), 263-277.

Chall, J. S. (1967). Learning to read: The great debate. New York: McGraw-Hill.

Clymer, T., Wong, O., Benedict, V. J. (1976). Reading 720, Ginn and Company (Xerox Corporation). Lexington, Mass.

Durkin, D. (1981). Reading comprehension instruction in five basal reader series. Reading Research Quarterly, 16(4), 515-544.

Durkin, D. (1983). Teaching them to read, 4th edition. Boston, MA: Allyn & Bacon, Inc.

Durr, W. K., LePere, J. M., Alsin, M. L., Bunyon, R. P., & Shaw, S. (1979). Houghton Mifflin reading series. Boston, MA: Houghton-Mifflin Company.

Early, M., Cooper, E. K., & Santeusanion, N. (1979). Harcourt Brace Javanovich Bookmark Reading Program, Eagle Edition. New York: Harcourt Brace Javanovich, Inc.

Engelmann, S., & Bruner, E. C. (1983). Reading Mastery: Distar Reading. Chicago, IL: Science Research Associates.

Gall, M. D. (1981). Handbook for evaluating and selecting curriculum materials. Boston, MA: Allyn and Bacon.

Hare, V. C., & Milligan, B. (1984). Main idea identification: Instructional explanations in four basal reader series. Journal of Reading Behavior, 16(3), 189-204.

Lesgold, A. M., & Resnick, L. B. (1982). How reading difficulties develop: Perspectives from a longitudinal study. In J. P. Das, R. F. Mulcahy, & A. E. Wall (Eds.), Theory and research in learning disabilities (pp. 155-187). New York: Plenum Press.

Meyer, L. A. (1982). The relative effects of word-analysis and word-supply correction procedures with poor readers during word-attack training. Reading Research Quarterly, 4, 544-555.

Meyer, L. A., Linn, R. L., & Hastings, C. N. (1985). The heuristic and measurement models during a study of reading comprehension development and science knowledge (Tech. Rep. No. L-2). Urbana: University of Illinois, Center for the Study of Reading.

Omanson, R. C., Beck, I. L., Voss, J. F., & McKeown, M. G. (1984). The effects of reading lessons on comprehension: A processing description. Cognition and instruction, 1(1), 45-67.

Pearson, P. D., & Johnson, D. D. (1978). Teaching reading comprehension. New York: Holt, Rinehart and Winston.

Winograd, P., & Brennan, S. (1983). Main idea in the basal readers. In J. A. Niles & L. A. Harris (Eds.), Searches for meaning in reading/language processing and instruction. Rochester, NY: National Reading Conference.

Table 1
First Grade
Decoding Instruction and Practice

Level	Analytic Phonics: Consonant Sounds	Vowel Sounds	Sound Blends	Letter Naming	Rules	Rhyming	Readers: Number of Vocabulary Words	Words in Text
				Houghton Mifflin, 1979				
B "Rockets"	628	24	35	237	0	82	233	1,394
C "Surprises"	164	0	188	230	8	37	57	1,748
D "Footprints"	227	28	205	219	0	0	139	2,323
E "Honeycomb"	401	6	40	122	0	0	178	6,799
				Harcourt, Brace, Jovanovich, 1983				
1 "Sun Up"	497	0	0	244	0	0	52	211
2 "Happy Morning"	234	0	0	205	0	45	40	1,384
3 "Magic Afternoon"	231	0	89	50	0	46	42	1,670
4 "Sun and Shadow"	42	132	255	100	10	100	153	5,141
5 "Together We Go"	344	284	107	71	0	101	138	8,758

Table 1 (Continued)

Level	Analytic Phonics: Consonant Sounds	Vowel Sounds	Sound Blends	Letter Naming	Rules	Rhyming	Readers: Number of Vocabulary Words	Words in Text
				Ginn, 1976				
2 "Pocketful of Sunshine"	669	0	0	301	0	0	38	1,937
3 "A Duck is a Duck"	165	254	28	9	5	12	36	523
4 "Helicopters and Gingerbread"	65	109	12	2	7	13	160	1,767
5 "May I Come In?"	270	183	144	22	13	8	253	5,689
6 "One to Grow On"	192	94	70	12	10	11	384	11,066

Table 2

Distar Reading Mastery, 1983

Lessons	Synthetic Phonics: Sounds in Isolation: Consonants	Synthetic Phonics: Sounds in Isolation: Vowels	Synthetic Phonics: Blending	Synthetic Phonics: Rhyming	Readers: Number of: Vocabulary Words	Readers: Number of: Words in Text
1-32	246	168	757	215	13	0
33-64	248	149	48	63	235	64
65-96	212	147	0	0	287	434
97-128	210	138	0	0	349	1,914
129-160	173	181	0	0	352	3,507

Table 3

Summary Basal Reading
Decoding Materials Analysis

Program	Analytic Phonics				Synthetic Phonics			Application	Reading Number of:	
	Sounds	Names	Rules	Rhyming	Sounds	Blending	Rhyming	Percent Words Read Using Phonics	Vocabulary Words	Words in Stories
Ginn, 1976	2255	346	35	44				< 10	871	20,982
Harcourt, Brace Jovanovich, 1983	2329	670	10	292				< 10	425	17,164
Houghton Mifflin, 1979	1478	808	8	119				< 10	607	12,264
Distar Reading Mastery, 1983					1872	805	278	> 96	1236	5,919

Table 4

First Grade
Comprehension Interactions

Houghton Mifflin, 1979

Level	Word, Text Explicit	Word, Text Implicit	Sentence Text Explicit	Sentence Text Implicit	Picture Text Explicit	Picture Text Implicit	Summary	Background Knowledge	Prediction	Opinion
B "Rockets"	76	123	274	214	145	26	63	15	37	32
C "Surprises"	44	130	227	253	73	14	0	24	28	24
D "Footprints"	0	359	213	208	108	99	7	40	44	30
E "Honeycomb"	0	239	478	179	99	134	10	49	58	39

Harcourt, Brace, Jovanovich, 1983

1 "Sun Up"	1	8	83	19	53	39	11	20	26	17
2 "Happy Morning"	17	6	130	41	31	12	8	39	10	14
3 "Magic Afternoon"	50	137	149	54	18	14	5	16	26	21
4 "Sun & Shadow"	14	2	176	39	83	27	55	77	14	24
5 "Together We Go"	134	341	439	341	47	34	63	61	24	35

Table 4 (Continued)

Level	Word, Text Explicit	Word, Text Implicit	Sentence Text Explicit	Sentence Text Implicit	Picture Text Explicit	Picture Text Implicit	Summary	Background Knowledge	Prediction	Opinion
				Ginn, 1976						
2 "Pocketful of Sunshine"	42	12	101	519	75	312	17	10	23	16
3 "A Duck is a Duck"	49	41	57	92	15	30	7	14	17	15
4 "Helicopters and Gingerbread"	2	43	81	68	3	30	32	23	15	10
5 "May I Come In?"	7	130	196	213	9	55	24	79	44	55
6 "One to Grow On"	78	341	316	215	7	45	20	96	87	39
				Supplement for Low Stanine Students Distar Reading Mastery, 1983						
Lessons 1-32	13	0	0	0	0	0	0	0	0	0
Lessons 33-64	119	0	0	0	0	0	0	0	0	0
Lessons 65-96	23	0	49	12	0	0	0	4	0	3
Lessons 97-128	0	0	221	57	0	0	0	17	0	17
Lessons 129-160	0	0	271	72	0	0	0	28	0	21

Table 5

First Grade Reading
Summary Materials Analysis: Comprehension

	Word, TE	Word, TI	Sentence, TE	Sentence, TI	Picture Exp./Imp.		Summary	Background Knowledge	Prediction	Opinion
HM, 1979	120	851	1192	854	425	273	80	128	167	125
$\frac{3962}{4215}$ = 94% text-tied										
HBJ, 1983	216	494	977	494	232	121	142	213	100	111
$\frac{2776}{3100}$ = 90% text-tied										
Ginn, 1976	178	567	751	1107	109	472	100	272	181	135
$\frac{3465}{3822}$ = 91% text-tied										
SRA, 1983	155	0	541	141	0	0	0	49	0	41
$\frac{837}{927}$ = 90% text-tied										

Table 6

Comprehensibility Analysis: Matched and Unmatched Selections

Matched Selections:

Publisher	Story Type	Title	Number of Incoherences	Number of Words	Average # Words/Incoher.	Number of Propositions	Average Prop./Incoher.
Houghton Mifflin	P	"Cookies"	4	410	102.5	66	16.5
Harcourt, Brace, Javanovich	P	"Animal Art Show"	33	462	14.0	60	1.8
Ginn	P	"Three in a Tree"	20	462	23.1	57	2.9
Distar Reading Mastery	P	"The Fat Eagle"	1	241	241.0	28	28.0
Houghton Mifflin	D	"Ira Sleeps Over"	7	846	120.9	144	20.6
Harcourt, Brace, Javanovich	D	"The New Boy in School"	22	317	14.4	44	2.0
Ginn	D	"Freckles"	25	282	11.3	46	1.8
Distar Reading Mastery	D	"A Man Liked to Go Fast"	1	248	248.0	27	27.0
Houghton Mifflin	E	"Real Dinosaurs"	16	175	10.9	33	2.1
Harcourt, Brace, Javanovich	E	"Trees and Paper"	13	131	10.1	20	1.5
Ginn	E	"Building a Road"	5	239	47.8	25	5.0
Distar Reading Mastery	E	None exists	--	---	--	--	---

Unmatched Selections:

Title	Number of Words	Number of Incoherences	Average Number of Words/Incoherence
		Houghton Mifflin, 1979	
"One Frog, Two Frogs"	474	6	79.0
"Lucy Didn't Listen"	797	7	113.8
"Musu and the Night Noises"	712	5	142.4
"Little Raccoon and the Thing in the Pool"	1249	9	138.8
		Harcourt, Brace, Javanovich, 1983	
"Going to School"	312	22	14.2
"Frogs"	220	17	12.9
"The Big Race"	458	16	28.6
"Paper Nests"	133	4	33.3
"The Beautiful Turtle"	380	16	23.8
"Happy Scared"	135	17	7.9
"Maria Martinez, Artist"	144	11	13.1
"The Bremen Band"	658	8	82.3

Table 6, Continued

Title	Number of Words	Number of Incoherences	Average Number of Words/Incoherence
		Ginn, 1976	
"May Ling's Pictures"	324	3	108.0
"A Balloon That Works"	210	5	42.0
"Sights of the City"	511	18	28.4
"Mother Time"	259	8	32.4
"The Other Side of the Mountain"	929	26	35.7
"The Boy and the Wolf"	448	9	49.8
		Distar Reading Mastery, 1983	
"The Duck and the Mean Pig"	107	1	107.0
"The Fat Fox and his Brother"	111	0	111.0
"The Pig that Bit His Leg"	107	0	107.0
"Finding Some Fun on the Moon"	120	1	120.0
"Bill Went Fishing"	203	2	101.5
"An Old Horse and an Eagle"	149	0	149.0
"The Red Toothbrush"	118	3	39.3

Table 7

Words Per Incoherence
for Matched and Unmatched
Stories

Publisher	Matched Stories		Unmatched Stories	
	$\bar{X}$	SD	$\bar{X}$	SD
Houghton Mifflin	78.1	(58.91)	118.5	(29.24)
Harcourt, Brace, Javanovich	12.8	(2.37)	27.0	(23.99)
Ginn	27.4	(18.62)	49.38	(29.68)
Distar Reading Mastery	244.5	(4.95)	104.97	(32.99)

Table 8

Total Decoding and Comprehension Talleys and Result Program Percentages

	Interactions			Percent of Interactions	
Program	Decoding	Comprehension	Total	Decoding	Comprehension
Ginn	2680	3822	6502	41%	59%
HBJ	3301	3100	6401	52%	48%
HM	2413	4215	6628	36%	64%
SRA	2955	927	3882	76%	24%

Figure 1

Houghton Mifflin 1979 Teacher's Guide for Footprints Unit 7 example of decoding instruction, p. 148

-ing* Ending *(Doubling Final Consonant) (Decoding Skills 114a, 114d)

LANGUAGE ARTS: WRITING

(spelling)

Print *fish* and *fishing* on the board. You know these words. What are they? . . . What letters were added to the word *fish* to make the word *fishing?* . . . You know that the ending *ing* may be added to some words to make other words. Say *fishing* softly to yourself and listen for the sounds that the letters *ing* stand for. . . . When you see the letters *ing* at the end of a word, they stand for the sounds you hear for those letters at the end of the word *fishing.*

Print *stop.* You know this word. What is it?

Print *stopping* below *stop.* You know this word, too. What is it? . . . **Point to *stopping* and say:** Was this word made by adding the *ing* ending? . . . To what smaller word was *ing* added? . . . What else was added besides the *ing* ending? . . . You know that sometimes when the *ing* ending is added to a word, the last consonant of that word is doubled before the ending is added.

Figure 2

Houghton Mifflin 1979 Teacher's Guide for Footprints Unit 7 example of decoding instruction, the paragraph below is the model for the words in the paragraph above, p. 147, p. 368

Discriminating Among Words (Decoding Skill 118)

See page 368 for model.

Words to be checked: *wait, after, animals, stopping*

Word rows:			
	want	wait	walk
	after	away	are
	animals	and	animal
	stopped	stopping	surprise

Discriminating Among Words (Decoding Skill 118)

Print the following words on the board:

day dog did

Then say: Which of these words is the word *dog?* . . . **Have a pupil come and point to *dog*. If a pupil points to the wrong word, show the pupil that word and the basal word being checked, one above the other, and help the pupil discover the differences between them.**

Use the same procedure with each of the following rows of words. The basal words to be checked for instant recognition are *man, house, like, walk, but, way,* and *little.*

can	man	mom
have	here	house
look	like	lion
walk	with	want
big	bus	but
we	way	away
lion	little	like

Figure 3

Houghton Mifflin 1979 Teacher Guide for Footprints Unit 7 examples of vocabulary instruction in context, p. 147

LANGUAGE ARTS: GRAMMAR

(sentence sense)

Prepare the following word and punctuation cards or use the cards for Unit 7 from the *Word Card Set for Footprints: After, animals* (2), *at, Dad, for, funny, get, going, He's, in, is, like, play, real, see, stopping, that, the* (4), *there, tickets, to* (2), *us, wait, we'll, You'll, zoo,* comma, period (4).

Say: Peter's two cousins, Wayne and Sonia, were visiting him for the weekend. It was Saturday afternoon, and the three children were on their way to Peter's school to see an animal puppet show. Peter's father was going to meet the children in front of the library and then go to the play with them.

Let's see if you can choose the right words to show what Peter said to Wayne and Sonia as the three children came in sight of the library.

Text to be built:

Dad is stopping there to wait for us.
He's going to get the tickets.
You'll like the funny animals in the play
After that, we'll see real animals at the zoo.

Ask: Where will Dad wait? . . . ***(in front of the library)***
Who will get the tickets? . . . ***(Dad)***
What will Peter, Wayne, Sonia, and Dad do after the play? . . . ***(see real animals at the zoo)***

Figure 4

Houghton Mifflin 1979 Teacher Guide for Footprints Unit 7 example of vocabulary instruction using letter-sound associations and context. The paragraph below is the model for use with the words in the paragraph above, p. 149, p. 369

Using Letter-Sound Associations and Context (Decoding Skill 115a)

See pages 369-370 for model.

Print: paint
Say: When Jeff finished his picture, he said, "I really like to _____."
Checking words: color *(wrong sounds)*
part *(no sense)*

Print: jump
Say: Look at that frog _____.
Checking words: jeep *(no sense)*
hop *(wrong sounds)*

Print: hill
Say: Can you climb to the top of the _____?
Checking words: mountain *(wrong sounds)*
hall *(no sense)*

Print: bed
Say: Dad called, "Time for _____!"
Checking words: dinner *(wrong sounds)*
bud *(no sense)*

Using Letter-Sound Associations and Context (Decoding Skill 115a)

Say: I am going to print on the board a word that you may not have read before but that you know if you hear it. Then I will say a sentence that ends with that word, but I won't say the word. Use what you know about the sounds the letters in the word stand for and use the sense of the rest of the words in the sentence to decide what the word is.

Print *back* on the board. Now listen: Every morning I walk to school and every afternoon I walk _____.

What is the word? **Point to *back.***
How did you know it wasn't *home?* . . . (Home *has the wrong beginning and ending sounds.*)
How did you know it wasn't *book?* . . . (Book *doesn't make sense with the other words in the sentence.*)

Erase *back* and print *much.* Now listen: You'd better start for home right now while it's not raining very _____.

What is the word? **Point to *much.***
How did you know it wasn't *hard?* . . . (Hard *has the wrong beginning and ending sounds.*)
How did you know it wasn't *match?* . . . (Match *doesn't make sense with the other words in the sentence.*)

Figure 5

Ginn 1976 Teachers Edition Helicopters and Gingerbread Unit 2, examples of vocabulary presented in context, p. 50, p. 56

1 PREPARATION FOR READING

INFORMATION FOR THE TEACHER

VOCABULARY

Basic
animals needs she helicopters airport

Decodable (words to be read independently)
big men in

INTRODUCING VOCABULARY

SPECIAL MATERIALS
Word card: *helicopters*
Picture card: helicopter

Place the picture of the helicopter in the card holder and have it identified. Have the title of the book recalled, and identify the word *helicopters* on the cover. Display the word card for helicopters. Explain that the second unit of the book will contain stories about helicopters, and that in the first story there is a man who needs a helicopter. Write on the chalkboard.

He needs a helicopter.

Read the sentence to the pupils. Have the new word ***needs*** located and underlined. Tell the children that if it were a woman who needed a helicopter, the sentence would read

She needs a helicopter.

Add the sentence to the chalkboard and have it read. Have *she* underlined.

Explain that sometimes animals need helicopters.

Write the following sentences:

Animals need helicopters.
A helicopter can help the animals.

Have the sentences read, providing help as needed. Have the word *animals* underlined in each sentence.

Ask the pupils where they think helicopters often land. Talk very briefly about airports.

Write the following sentence. Have it read and the word *airport* underlined.

Helicopters go to the airport.

Now ask a volunteer to locate the word *animals* in one of the sentences, circle it, and read the sentence orally. Continue in this manner, giving each pupil a chance to circle one of the new vocabulary words and read the sentence in which it appears.

4 DEVELOPING READING SKILLS

VOCABULARY

Word recognition: The pupil will identify the new vocabulary words.

SPECIAL MATERIALS
Word cards: *airport, animals, helicopters, needs, she*

Place the word cards in the card holder. Briefly review the new words by saying a word and having a volunteer identify the appropriate word card. Finally, have all words read orally.

Write the following paragraph on the chalkboard. Have the pupils read it silently. Ask someone to read it orally.

Helicopters are at the airport.
Here's a big helicopter.
Kit is in the helicopter.
She needs the helicopter to help the animals.

Next, have pupils take turns underlining the new words in the paragraph. Have several pupils read all the underlined words individually.

To help pupils recognize the new vocabulary, distribute activity page 18.

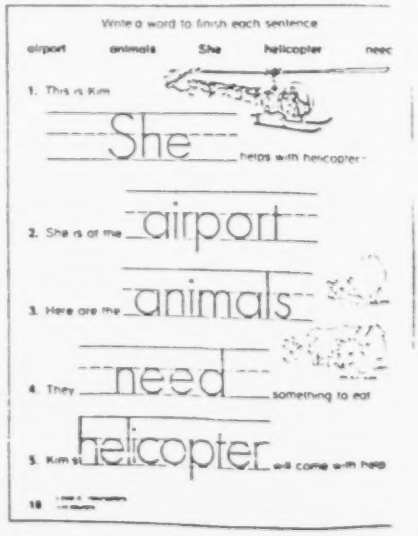

Write a word to finish each sentence.
airport animals She helicopter need
1. This is Kim.
She helps with helicopter.
2. She is at the airport.
3. Here are the animals.
4. They need something to eat.
5. Kim sees a helicopter and come with help.

Figure 6

Ginn 1976 Teachers Edition Helicopters and Gingerbread Unit 2 examples of decoding instruction, p. 57, p. 58

DECODING

Phonemic analysis: The pupil will decode words containing the correspondences /ly/e as in *be* and /ly/ee as in *knee* (Introductory Activity).

List the following on the chalkboard: *he, we, me.*

Let a volunteer read the words. Then ask the pupils what is alike in all the words. Have the letter *e* named and underlined in each word. Tell the pupils that in these words the letter *e* stands for the glided vowel sound. Have all the pupils read the words, noting the glided (long) vowel sound.

In another column write the following: *see, bee.*

Give volunteers an opportunity to read these words. Provide help as needed. Then call attention to the two letters *ee* at the end of each word. Help the children discover that these letters stand for the same glided (long) vowel sound that is heard in *he, we,* and *me.* Read *see* and *bee* with the children and have the letters that stand for the glided vowel sound underlined in each one.

Now read the following sets of words and have individual pupils repeat the word in each pair that contains the same glided vowel sound that is heard in *he.*

hands-feet	chin-cheek	green-blue	these-those
heel-toe	knee-wrist	cheese-crackers	day-week

DECODING

Structural analysis: The pupil will decode words with the graphemic bases *eel, eal, eed* (Introductory Activity).

Write *feet* on the chalkboard. Read the word. Then write *meet* and *beet* in a vertical list under *feet.* Ask a volunteer to find the word-part that is the same in all three words. Have the words decoded, helping as needed. Draw a vertical line between the initial consonant letters and the graphemic base *eet* to focus attention on the visual similarity of these three words. Have the words read again.

Leave the list of words on the chalkboard and then adapt the preceding procedure for decoding the words containing the bases *eel* and *eed.* The following words may be used.

feel	feed
heel	seed
peel	weed

Give help with word meanings as needed. Then read the following incomplete sentences. Have the children read and circle a word on the chalkboard that completes each sentence.

The back of your foot is called a _____ (heel)
To walk you have to move your two _____ (feet)
If you have a pet you need to _____ it every day. (feed)

To help pupils decode words containing graphemic bases *eet, eel,* and *eed,* distribute activity page 21.

Circle the sentence that tells about each picture.

1. "Look at the feet," said Kim.
"Look at the beet," said Kim.

2. Lee will need the animals.
Lee will feed the animals.

3. Ken will peel something.
This is a heel.

4. Jen and Len meet and say, "Hello."
Jen and Len eat a beet.

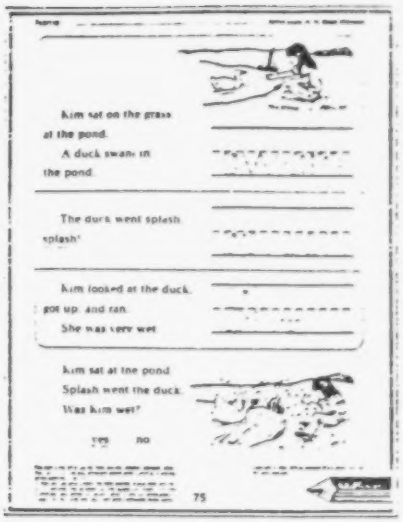
5. You can peel this.
This is a heel.

21

Figure 7

Harcourt Brace Jovanovich 1983 Teachers Edition Magic Afternoon Unit 7

examples of vocabulary presented in context, p. T195, p. T196


Kim sat on the grass at the pond.
A duck swam in the pond.
The duck went splish splash!
Kim looked at the duck, got up, and ran.
She was very wet.
Kim sat at the pond.
Splash went the duck.
Was Kim wet?
yes no
75

Identifying words using context and knowledge of *sh*. Say the words for the pictures beside each sentence on the bottom half of the page, and have pupils repeat them. The pictures are:

sheep, rabbit, ship
chair, shell, shower

Tell pupils to read the two sentences silently and complete them by underlining the picture for the word that makes sense and also begins with the sound that *sh* stands for.

See "Providing for Individual Differences" for additional practice with these skills.

Vocabulary and Language Skills

Review Words

Reviewing *friend, surprise, wet, save, saw*. Display the word cards and have pupils read the words. Then read the following sentences. Have pupils complete each one with one of the displayed words.

The car was a big _____. (surprise)
The cat stayed out in the rain and got _____. (wet)
Mr. Fig has a _____ named Turtle. (friend)
On the magic box, Rabbit _____ Mouse. (saw)
Will they _____ Mouse? (save)

New Words and Language Skills

Tell pupils that they are going to learn some words that will be in the story they are going to read.

Direct pupils to page 75 of *Reading Skills 2/3*.

Reading Skills 2/3, Page 75

Recognizing *swam, splash, she*. Direct pupils' attention to the picture at the top of the page, and have them read the first sentence silently. In the next sentence is one of our new words, swam. The word swam tells us what the duck did. It begins with the same sound as swing and rhymes with jam. Read the sentence and find the word swam. Display word card *swam*. Have pupils frame *swam* and compare it with the word card. Tell them to underline the new word and to trace it in the writing space. Have the traced word and the sentence read aloud.

Display word card *splash*. Our next new word is splash. Sometimes people splash when they dive into water. Read the next sentence and frame the word splash. After pupils compare their responses with the word card, have them underline *splash* each time it appears in the sentence and trace it in the writing space. Have the traced word and the sentence read aloud.

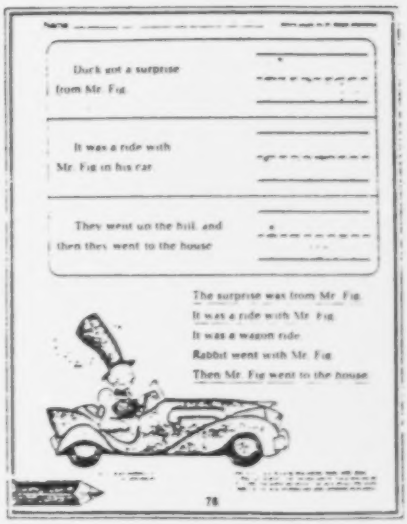
To present the word *she*, direct attention to the next row and supply the following phonics clues: The new word begins with the same sound as shadow and rhymes with he. Display word card *She*, and repeat the underlining and tracing procedure. Have the traced word and the sentence read aloud.

Using new words. Have pupils read the sentences at the bottom of the page. Tell them to underline the word that correctly answers the question.

Recognizing the exclamation point and comma. Read the sentence in row two on page 75, showing by your expression the meaning of the exclamation point. Ask pupils what punctuation marks they see in the sentence. (a comma and an exclamation point) Then review what the comma and the exclamation point mean. Have pupils find another sentence in which a comma separates words in a series. (first sentence in row three) Then have various pupils read each sentence, observing the punctuation.

Finding antecedents of pronouns. Direct pupils' attention to the sentence on page 75 that begins *Kim looked . . .* Ask a pupil to name the first word in the next sentence. (*She*) Whom does the word she stand for? (Kim) What word might have been used instead of she? (Kim) Have a pupil read the sentence, substituting Kim for *she*. Compare the meaning of the two versions, helping pupils to see that there is no change in meaning.

Direct pupils to page 76 of *Reading Skills 2/3*.


Duck got a surprise from Mr. Fig.
It was a ride with Mr. Fig in his car.
They went up the hill, and then they went to the house.
The surprise was from Mr. Fig.
It was a ride with Mr. Fig.
It was a wagon ride.
Rabbit went with Mr. Fig.
Then Mr. Fig went to the house.
76

Reading Skills 2/3, Page 76

Recognizing *from, with, then*. On this page we will meet the rest of the new words in our story. One of our new words is in the first sentence. This word is from. Read the sentence silently and frame the new word. Display word card *from*, and have pupils compare the word on the card with the word they are framing. Then tell them to underline the new word and to trace it in the writing space. Have the traced word and the sentence read aloud.

Another one of our new words is in the next sentence. It begins like web with w. This new word is with. Read the sentence. Have pupils frame the word *with*, compare it with the word card, underline it, and trace it. Have the traced word and the sentence read aloud.

Our other new word is in the next sentence. This new word begins with the same sound as they and rhymes with men. Have pupils read the sentence, say the word aloud, frame it, and compare it with the word card. Then have them underline the word then in the sentence and trace it. Have the traced word and the sentence read aloud.

Using new words. Direct attention to the picture at the bottom of the page. Have pupils read the five sentences beside it and underline each one that tells about the story in the boxes above it.

Display word cards *splash, swam, she, with, then,* and *from*. Have a pupil point to each word as you say it. Then point to the words in random order and have pupils read them aloud.

See "Providing for Individual Differences" for additional practice with these skills.

Figure 8

Harcourt Brace Jovanovich 1983 Teachers Edition Magic Afternoon Unit 7

examples of decoding instruction, p. T194, p. T201

Preparing to Read

Oral Activities

Recognizing initial *sh* Display key card *shadow* for initial *sh*, and have pupils identify the picture. Does shoe begin with the same sound as shadow? (yes) Does shop begin with the same sound as shadow? (yes) Shoe, shop, and shadow all begin with the same sound.

Relating *sh* to *s* What letter stands for the sound at the beginning of sun? (s) When pupils reply, write s on the chalkboard. You know the letter that stands for the sound at the beginning of hat. What is it? (h) Write *h* to the right of the *s*. Does sun begin with the same sound as shadow? (no) Does hat begin with the same sound as shadow? (no) So, s and h together stand for one sound that is different.

Write shop on the chalkboard and read the word. We said that shop begins with the same sound as shadow. Does shop begin with the same letters as shadow? (yes) What are the letters? (*sh*) Underline the *sh*.

Distribute individual letter cards *sh*. Say the words below. Tell pupils to hold up their *sh* cards each time you say a word that begins with the same sound as shadow.

shop, ship, shelf, shade, cat, short, see, shaggy, shine, sand, chalk

Tell pupils to listen carefully to the sentences you will be reading. Have them hold up their cards each time you say a word that begins with the same sound as shadow. Read the following:

A ship cannot sail in water that is *shallow*.
The sheep dog has shed.
Sheila and Sharon collect shells at the *shore*.

Written Activities

Writing the digraph *sh* Have pupils practice writing the letters *sh* on their palms with their index fingers.

Direct pupils to page 74 of *Reading Skills 2/3*.

Reading Skills 2/3, Page 74

Direct attention to the key picture. Ask pupils to read the word *(shadow)* and to name the letters that stand for its first sound *(sh)*. Have pupils trace the letters in the writing space.

Relating *sh* to *sh* Direct attention to the two rows of pictures on the top half of the page. The pictures are:

Things to wear: shoe, shirt, mitten
Things at the seashore: shovel, bail, shell

Some pupils may be able to identify the pictures in each row and tell the category to which all three pictures belong. For other pupils, say the words for the pictures and have pupils repeat them. Tell the category if pupils do not volunteer it. For each row, have pupils trace the letters *sh* and then draw a line under the picture for each word that begins with the same sound as *shadow*.

Providing for Individual Differences

Additional Practice

Recognizing initial *sh* Read the following words. Have pupils clap their hands each time you say a word that begins like shadow.

shirt, funny, shine, book, mouse, share, tell, should, short, china, sheet, sharp

Tell pupils a story about a girl named Sharon. When Sharon goes shopping, she buys only certain things. She only buys something if its name begins like her name. Ask these questions:

Would Sharon buy a pail or a shovel? (a shovel)
Would she buy a shirt or a hat? (a shirt)
Would she buy shorts or a belt? (shorts)
Would she buy a coat or a shawl? (a shawl)
Would she buy socks or shoes? (shoes)